

Set	Items	Description
S1	656200	LAMP? OR FLUORESCEN?
S2	3120	(EXTERNAL? OR OUTER?) (3N)ELECTRODE?
S3	889611	WOUND? OR WIND? OR ENVELOPE?
S4	8	S2(4N)S3
S5	957	FEED(2N)WIRE?
S6	10087	DISCHARGE()TUBE OR GLASS()TUBE?
S7	0	S1 AND S4 AND (S5 OR S6)
S8	1	S1 AND S4
S9	6	S1 AND S2 AND S3
S10	6	S9 AND PY<=1999
S11	5	RD (unique items)
S12	4	S11 NOT S8
S13	0	S9 AND (S5 OR S6)
S14	80	S1 AND S2
S15	2	S14 AND PD<=19990922
S16	2	RD (unique items)

? show files

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?

8/9/1 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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0379361 NTIS Accession Number: AD-759 752/XAB

**IRCM Lamp Development**

(Final rept. 1 Feb-31 Jul 72)

Sain, W. H. ; Anderson, N. C.

Eimac San Carlos Calif

Corp. Source Codes: 400575

Report No.: EIMAC-TR-73-5

30 Sep 72 47p

Journal Announcement: GRAI7312

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Contract No.: N00014-72-C-0256

The purpose of this program was to design, develop and fabricate two prototype CASPAR/CAIR arc **lamps**. The EIMAC IRCM source was patterned after the ADM-1 series E source. The **lamp** is of double envelope design. The inner (arc) envelope consists of a synthetic (cesium-filled) sapphire tube with refractory metal **electrodes**. The **outer envelope**, quartz/metal assembly, is evacuated to protect the inner envelope from oxidation during operation. High temperature brazing alloys for sapphire/Cb-1Zr seals were evaluated and thermal cycling tests made on brazed seal structures. Techniques for cesium filling were investigated. Power tests were run with the sapphire inner envelope portion in a vacuum bell jar to verify the thermal design and determine basic design deficiencies. (Author)

Descriptors: Infrared **lamps**; Reliability(Electronics); Countermeasures; Cesium electron tubes; Design; Electrodes; Anodes(Electron tubes); Test methods

Identifiers: IRCM(Infrared Countermeasures); Infrared countermeasures; NTISN

Section Headings: 46C (Physics--Optics and Lasers)

?

16/9/1 (Item 1 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
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08049176 Genuine Article#: 241FE Number of References: 21  
Title: **Fundamental research on mercuryless fluorescent lamps 11 -**  
**External electrode operation with pulsed dielectric barrier**  
**discharge**

Author(s): Jinno M (REPRINT) ; Kurokawa H; Aono M  
Corporate Source: EHIME UNIV, FAC ENGN, DEPT ELECT & ELECT ENGN, 3 BUNKYO  
CHO/MATSUYAMA/EHIME 7908577/JAPAN/ (REPRINT)

Journal: JAPANESE JOURNAL OF APPLIED PHYSICS PART 1-REGULAR PAPERS SHORT  
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Language: English Document Type: ARTICLE

Geographic Location: JAPAN

Subfile: CC PHYS--Current Contents, Physical, Chemical & Earth Sciences

Journal Subject Category: PHYSICS, APPLIED

Abstract: The characteristics of electrodeless xenon discharge **fluorescent**  
**lamps** using dielectric barrier discharge are described in this  
paper. All **lamps** were operated with pulsed discharge. The luminance  
of phosphor increases as the pressure of xenon increases. As the  
pressure of xenon increases, the second peak of phosphor emission  
increases. These increases seem to be caused by the VUV light of xenon  
excimers. Therefore, in order to obtain high luminance, xenon should be  
filled at high pressure. In the case of the **lamp** operated by inner  
electrodes, if only xenon is contained in the **lamp**, the cathode is  
bombarded and is damaged by the large mass of a xenon ion. On the other  
hand, the **external electrode** type is never damaged by the ions or  
electrons. Moreover, the efficacy of the **external electrode** type is  
as great as the inner electrode type, and it can be improved by  
increasing the distance between electrodes.

Motivation  
for  
external  
discharge

Descriptors--Author Keywords: afterglow ; pulsed discharge ; **fluorescent**  
**lamp** ; mercuryless ; xenon ; rare gas ; excimer ; dielectric barrier  
discharge ; electrodeless

Identifiers--KeyWord Plus(R): MICRODISCHARGE; ULTRAVIOLET; EMISSION;  
PLASMA; XENON; ATOMS

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